

Development of an All Solid High Energy Density Space Rated Battery, Phase I

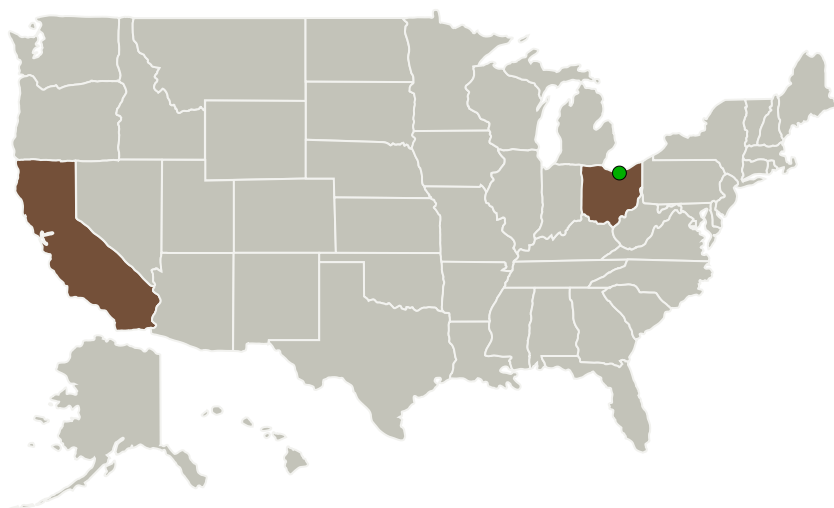
Completed Technology Project (2011 - 2011)



Project Introduction

Quallion's intends to develop an all-solid 600 Wh/kg, flexible form-factor lithium rechargeable energy device for advanced space power applications. Quallion's approach is to achieve greater than 600 Wh/kg combines three key proprietary developments: (1) a recently developed electrolyte, (2) a lithium surface treatment technology and (3) a high energy density cathode. The all-solid high-energy density battery can meet NASA mission requirements. The system has a non-flammable electrolyte, making it safer than current state-of-the-art, but with greater energy and tolerance to abuse, making it ideal for manned missions. NASA would be able to deploy this battery without any risk of fire or catastrophe.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Quallion, LLC	Lead Organization	Industry	Sylmar, California
 Glenn Research Center(GRC)	Supporting Organization	NASA Center	Cleveland, Ohio



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Primary U.S. Work Locations

California

Ohio

Project Transitions

 **February 2011:** Project Start

 **August 2011:** Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/138094>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Quallion, LLC

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

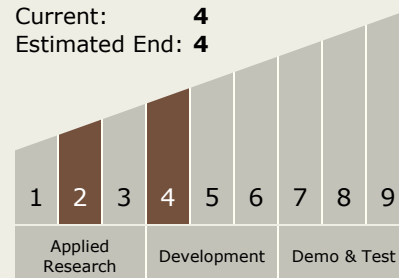
Carlos Torrez

Principal Investigator:

Hisashi Tsukamoto

Technology Maturity (TRL)

Start: 2
Current: 4
Estimated End: 4



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Technology Areas

Primary:

- TX03 Aerospace Power and Energy Storage
 - └ TX03.2 Energy Storage
 - └ TX03.2.1 Electrochemical: Batteries

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System